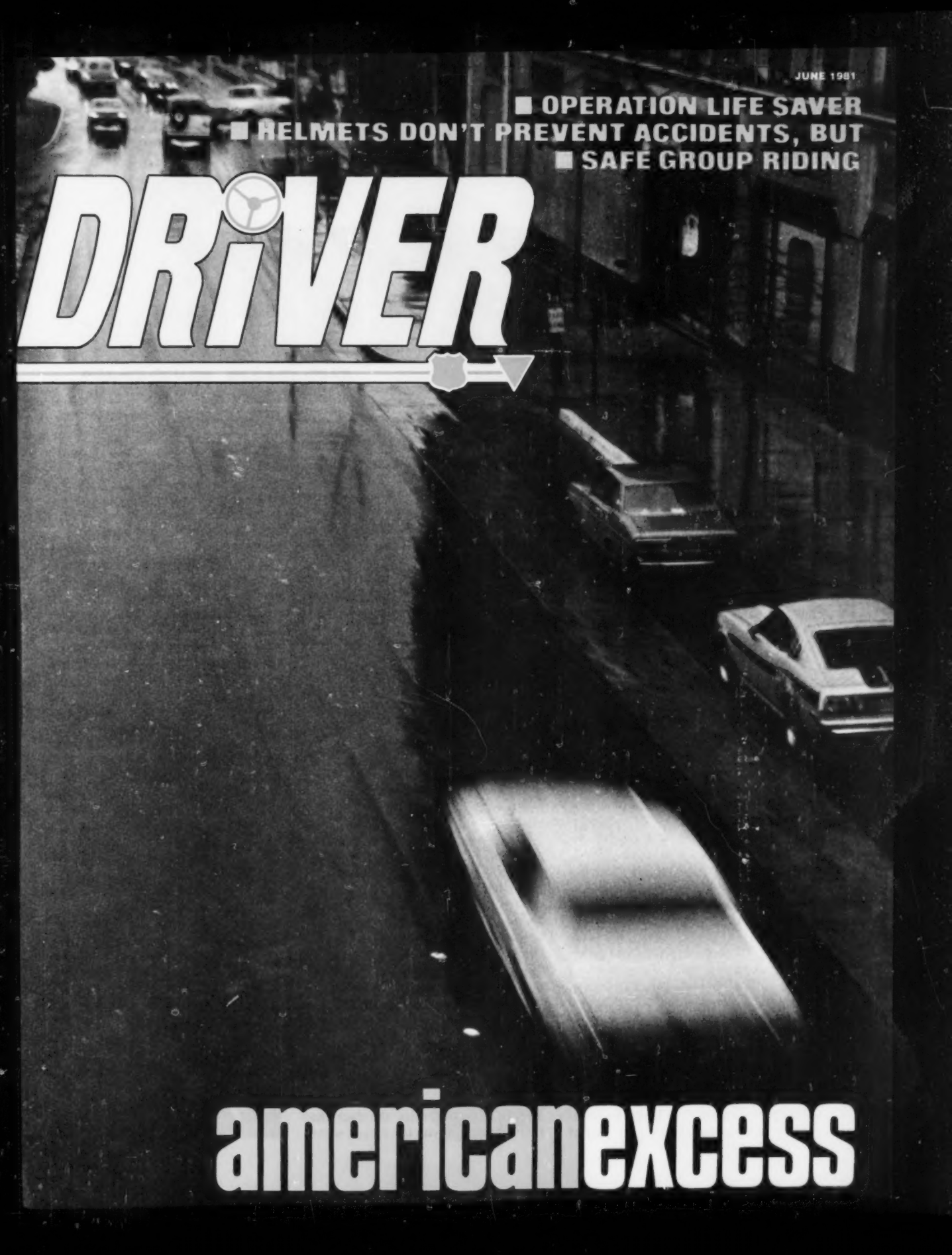
JUNE 1981
■ OPERATION LIFE SAVER
■ HELMETS DON'T PREVENT ACCIDENTS, BUT
■ SAFE GROUP RIDING
DRIVER
americanexcess

DRIVER

SAFE

GROUP RIDING

Motorcycling is a great way to travel. It may be the perfect transportation for the individual. It can also be good two-up (see "April Dual," DRIVER Magazine, April 1981). Yet the real joy of motorcycling may be in group riding.

No, you won't have to join the "Hell's Angels" to find out for yourself. You and one other motorcyclist can make a good riding group . . . and a safe one, too.

Basically, group riding draws a lot of attention. It's really good for the old ego to have everybody turning and looking when your group motors past. But foremost, it is just plain fun.

When riding in a group, you know that when you stop there'll be somebody you can talk with. On the road, the purr of the other motorcycles always does something for your peace of mind.

And when it comes to peace of mind, you can't beat safety in numbers. If you do have an accident, all the group isn't going to be involved. Therefore there'll be people available to administer first aid and go for help.

But as we said, being with others is enjoyable and group riding is just plain fun.

The best place to learn about group riding is with a club of experienced riders. They should have a training program. Then when you've gained enough experience they'll have a specific place for you to ride — usually at the back.

When you're just learning group riding, you'll want to stay with very small groups. One or two other motorcycles is plenty to keep the inexperienced rider busy. In larger groups things happen too fast for the uninitiated.

And when there is just you and one other motorcyclist don't expect that you are going to ride side-by-side just like Ponch and Jon on "CHiPs." First of all, most of the TV you see is shot with the two actors astride bikes that are on a trailer. That's how they maintain such smoothness without constantly drifting toward each other. Secondly, and more importantly, you're never going to receive the training that Highway Patrol motor officers get for their formation-style riding. CHiPs you ain't; and CHiPs you'll never be.

Side-by-side riding may be fun, but it is really more hassle than it's worth. The safest way to group ride is in a staggered formation. Each rider stays a full two seconds behind the machine directly in front of him and one second away from the motorcycle on the other side of the lane.

Even with the staggered formation, the largest safe group is four bikes. However, there may be times when extremely large clubs are forced into groups of six to eight motorcycles. Groups any larger than this are often not recognized as single units by car traffic. As a result, cars constantly cut into the clusters.

As was pointed out earlier, things happen too fast in large groups for inexperienced riders to deal with. Even the experienced riders have problems. Believe it or not, group riding may require more operator attention than being on one's own.

If you're not paying really close attention, you'll miss the fact that bikes in front of you have been weaving just a little bit to avoid a road hazard. All of a sudden the machine directly in front of you moves over and you're on the obstacle with little or no time to identify, predict, decide and execute. Bang! You've hit it!

Then there is the "accordion effect." One minute you're pushing your machine hard to keep up. The next, you're on the front brake to keep from running over the rider in front of you.

Generally, motorcycle groups travel at lower overall speeds than single machines. The perfect example of why this happens would be turning at a stop sign. The motorcyclists will wait at the intersection in pairs, then make the turn and accelerate. But they can't accelerate up to their cruising speed. They have to wait for the

continued

CHiPs You Ain't

DRIVER

THE
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FOR THE MILITARY DRIVER

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JUN

VOLUME 15 NUMBER 1

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THE EDITOR SPEAKS

DOUBLE CLUTCH

GOINGS ON IN GOVERNMENT

About 35 automobile safety and pollution control regulations will be modified or eliminated if proposals of the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) are adopted. Among the most interesting is NHTSA's final rule delaying for one year the effective date of the automatic occupant protection standard — that is, air bags and automatic seat belts.

There are three proposed alternatives:

Alternative One: The sequence of compliance with the passive restraints rule would be changed so that small cars would have to comply on September 1, 1982, mid-size cars on September 1, 1983, and large cars on September 1, 1984.

Alternative Two: All cars would begin compliance at the same time, on March 1, 1983. In addition, the first and second alternatives would amend the automatic restraint requirements so that those restraints would not be required in the front center seating position.

Alternative Three: All automatic restraint requirements would be rescinded.

According to the automotive press, the administration is considering a "two-car" scenario for the emissions control program (clean air). Vehicles which are essentially uncontrolled would be allowed to operate in areas of the country which can meet the present clean air standards. In areas which can't meet those standards, the only cars allowed to operate would be those meeting 1981 emission standards. According to experts, this revision would save several billion dollars per year in purchase prices and operating costs. Most of the savings would come through the elimination of the catalytic converter and the resultant return to less expensive leaded fuel. Best guess is that 60% of the cars in the U.S. would not have to meet the 1981 standards.

If this plan were actually adopted by Congress, mobile people such as military members might find themselves forced to trade cars when moving from "clean" areas to "dirty" ones. At any rate, we can expect a major review of the Clean Air Act before the end of this year.

safe group riding

continued

Group riding offers a number of benefits including having somebody who speaks a common language to talk with when taking a break.

group to form back up before increasing their speed to the cruising range.

As always, city cross traffic is going to play havoc and must be adjusted for.

Another problem is passing and lane changes. Passing should be handled individually, not as a group, while lane changes occur from the rear of the group.

If you haven't already guessed, numerous rules have to be established for the group before any bike rolls down the road. This has to include establishing signals.

In recent years, signaling has been made easier by CB radios. Even this, however, requires a great deal of preplanning. The radio air waves take on the sounds of a military operation with no chatter other than those who are authorized to talk. This usually is limited to the road captain at the front of the group speaking to the assistant at the back and vice versa.

Another established rule has to deal with who stops when a machine breaks down. Usually only one rider will stop with the disabled machine. The rest of the group proceeds to the next available stopping area. There they will wait or send back one rider to get a report on the problem. Of course, with CB radios all they have to do is call for a report.

But the key is to establish who is going to do what for each situation. And the only way to know what situations can develop is through experience. Therefore, to overstate the facts: only experienced cyclists tackle group riding. There are just too many things that can go wrong. Most inexperienced motorcyclists have enough to do when concentrating on their riding, the road, and other traffic. Having to divide this attention with other riders is usually more than the green rider can cope with.

Emergency situations never seem as bad when there's a pal along to assist with the repairs, first aid or going for help.

Most veteran group riders agree that they only ride with other motorcyclists whose riding habits they know. As one Motorcycle Safety Foundation chief instructor put it:

continued

safe group riding

continued

(left)
Before starting out on a group ride establish a set of signals and safety rules.

(below)
Ride in a staggered formation to allow room for each cycle to maneuver. Stay two seconds behind the bike directly in front and one second behind the one on the other side of the lane.

Passing other vehicles is still done individually when group riding.

"Riding with people you don't know is like standing on ball bearings and trying to sit on a needle."

This gets back to knowing what the other operator is going to do in any given situation. You have to be able to trust the other riders in the group. And the rules must be established before hitting the road.

Who moves first? Who is going to do what? Usually it is the lead rider who moves first. Usually the lead rider operates near the road's centerline. Which brings us to another general group riding rule: the rider nearest the centerline has the right-of-way . . . and needs it.

In the small group of two riders some of the same problems exist, some different ones develop and

continued

Lane changes begin at the back of the group. This way the rear machine blocks for the rest of the group.

The lead rider always moves first and usually rides closest to the centerline. As a result, the rider closest to the centerline always has the right-of-way in the group.

continued

Don't expect a warm reception from the senior citizens in a retirement community if this is how you dress and ride.

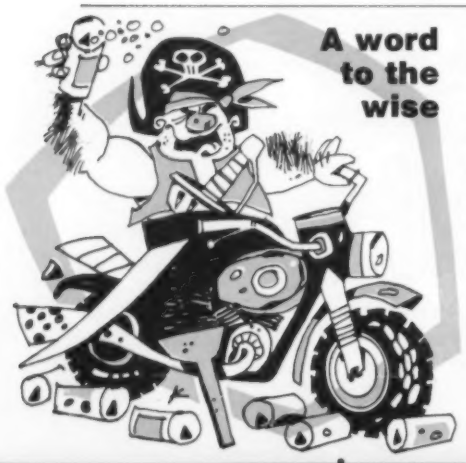
most all the rules still apply. To begin with, a communications system is still going to have to be established before taking off. And this applies to procedures, also.

The real hazard for a group of two riders is the temptation to ride too fast. To speed. Two riders seem to bring out the competitive spirit in each other. They start playing. They start dicing. This is especially true if the road is at all winding.

The result is they start running faster. Then they run closer. Then something goes wrong and they either bounce off one another or one runs over the other. No matter how it happens or why, the other rider becomes the biggest hazard.

Regardless of how big or small the group, when the situation becomes risky the group is going to have to break up for the safety of all. For example, if a group were navigating a twisting mountain road and encountered fallen debris, the best way to avoid the danger would be single file with a full two-second interval between machines.

Finally, if you remember just one thing from this article, let it be this: *group riding takes discipline.*



A word to the wise

Motorcycle groups draw a lot of attention. As a result they come under some very close scrutiny — especially from law enforcement organizations.

The dressier your group, the less likely you are to pose a threat to the local citizenry.

However, if you look like part of the "Hell's Angels," be prepared to be treated as if you were criminals.

When you are in a group — any group — you are no longer an individual, but just a part of the overall picture. And if that picture threatens people they are going to be hostile.

These signals will not cover every communications need, but they should provide a good starting point. Remember, these signals must be seen to be understood. Acknowledge comprehension with a nod of the head or a flick of the dimmer switch. The rider in the rear can turn off or flick the headlight to attract the attention of the forward rider; the forward rider acknowledges with a nod or "come alongside" signal, then the rear rider makes the signal. These signals have been purposely kept left-handed to keep the right hand on the throttle-brake controls for safety.

COME ALONGSIDE: Arm extended (palm forward) down. Begin behind hip and swing forward stopping at side and pointing to a position for the other cycle.

TURN SIGNALS (Accidentally left on): Open and close hand with fingers and thumb extended.

STOP (SLOW DOWN): Arm extended straight down, palm back.

SPEED UP: Arm down to side, first clenched with twisting motion as if turning throttle.

FOLLOW ME: Arm extended straight up from shoulder, palm forward.

YOU LEAD: Arm extended (palm forward) down. Begin behind hip and swing forward in an arc away from body about 45 degrees from vertical.

SINGLE FILE: Arm and index finger extended straight up.

DOUBLE FILE: Arm extended straight up with "rams horn" sign.

HAZARD IN ROAD: Point immediately with emphasis. (Sometimes this *must* be done with the right arm.)

PULL OFF: Arm positioned as for right turn, forearm swung toward shoulder.

HEADLIGHT: Tap on top of head open palm down.

FUEL: Arm out to side, upper arm about 45 degrees below horizontal, forearm pointing to tank with forefinger extended.

FOOD, COFFEE STOP: Fingers closed, thumb to mouth.

COMFORT STOP: Upper arm extended horizontally, forearm straight up, fist clenched with short up and down motion.

OPERATION Life Saver

A seat belt demonstrator was manned in front of the BX all day.

Each year, at least 12,000 lives could be saved in traffic accidents in the United States if everyone used seat belts consistently. Every opinion survey made shows that most people truly believe seat belts not only save lives but also give one a better chance of escaping serious injury in mishaps. Yet seat belt use — never estimated to be as high as one in five — is on the decline!

AFR 127-1 requires all operators of and passengers in government motor vehicles or private vehicles being used on government business to wear installed seat belts when the vehicle is in motion. AFR 127-7 also requires all military personnel and civilians operating or riding in private motor vehicles on a military installation to wear installed seat belts. Everybody knows these requirements are widely ignored. And if buckling up is ignored on duty, for sure it's ignored the rest of the time as well.

What can be done about it? How do we convince people that accidents don't just happen to the other guy?

Early this year, the Safety folks at Air Force Systems Command were thinking about all this. Since 1973, 38 of the Command's people had been killed in private motor vehicle mishaps. Thirty-two of the 38 weren't wearing the one device that might have saved their lives.

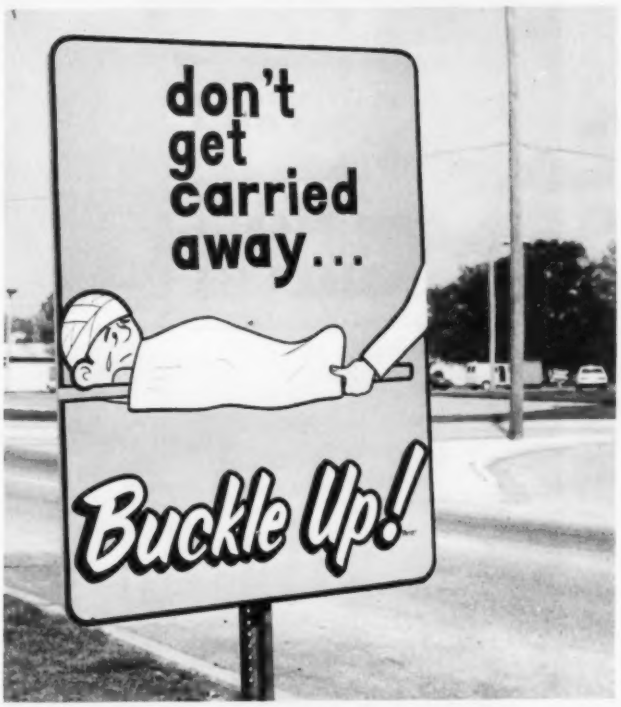
So headquarters sent the word out to all their subordinate organizations: Emphasize seat belt use!

On these pages we show some examples of how Eglin AFB responded. This isn't a one-day campaign but an on-going effort to get people in the habit of using belts.

Photos courtesy Eglin AFB

(below left)
A banner proclaiming Friday the 13th Operation Life Saver day was stretched across a main traffic artery on base. The NCO Club and the bank advertised seat belts on their outside signs and *The Eglin Eagle* printed articles about seat belt effectiveness.

(below)
The "Grim Reaper" stalked the Commissary parking lot with a bull horn, encouraging people to wear their belts and to see a seat belt film that was shown every hour at the base theater. Almost 400 people saw the movie, "Room to Live."



Disc jockies on local radio plugged Eglin's Operation Life Saver starting early in the morning as people were rising and getting ready for work. Billboard signs like these were erected in strategic spots around the base.

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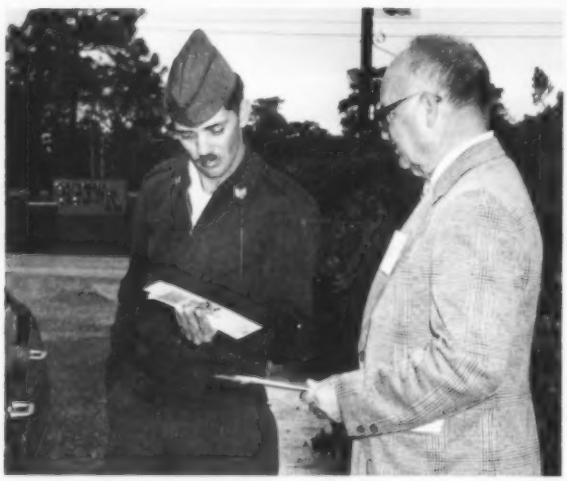
FACTS from Operation LIFE SAVER

The principles behind the protection that safety belts provide can be illustrated by dropping two eggs. Drop one egg onto a hard surface. The egg receives the full force of impact on a small area of its shell and it breaks. Drop another egg onto a sponge. The sponge compresses to absorb and distribute some of the impact force, and the egg doesn't break.

Fastened seat belts function like the sponge. During a crash, a belt distributes the forces of your rapidly decelerating body over a larger area of your body. The stretching seat belt also absorbs some of the forces. You are held in place while the car crunches to a stop. When it stops, you are still moving, but the remaining motion is absorbed safely by the belt. You won't be subjected to the second collision inside the car, and you won't be ejected. Your chances of survival, and without serious injury, are extremely good.



Printed brochures, promotional "Life Saver" candies, and notes encouraging people to buckle up were passed out at the base service stations, bank, credit union, and the BX/Commissary parking lots.

How many of these FAIRY TALES have you told?

"I might be saved if I'm thrown clear of the car in an accident."

Rubbish! The fact is that your chances of being killed are almost 25 times greater if you're thrown from the car. The forces in a collision can be great enough to fling you as much as 150 feet — about 15 car lengths.

Safety belts can keep you from:

- plunging through the windshield
- being thrown out the door and hurtled through the air
- scraping along the ground
- being crushed by your own car.

In almost any collision, you're better off being held inside the car by safety belts.

"If I wear a safety belt, I might be trapped in a burning or submerged car!"

Fiddlesticks! Less than one-half of one percent of all injury-producing collisions involve fire or submersion. But if fire or submersion does occur, wearing a safety belt can save your life.

If you're involved in a crash without your safety belt, you might be stunned or knocked unconscious by striking the interior of the car. Then your chances of getting out of a burning or submerged car would be far less.

You're better off wearing a safety belt at all times in a car. With safety belts, you're more likely to be unhurt, alert and capable of escaping quickly.

"It takes too much time and trouble to fasten my safety belt."

Now there's a fairy tale that's an earful. In reality, fastening your safety belt may take some time and trouble — but not too much. It all depends on:

- how complex your belt is
- how well you know how to use your belt
- how difficult it is to find the belt ends.

That much time and trouble you can live with — if you want to live.

"I'm uncomfortable and too confined when I wear a safety belt."

Belts are designed to allow you to reach necessary driving controls, and the newer shoulder belt retractors give you even more freedom. When reaching for things that will take you away from the steering wheel, it's safer to pull off the road or ask your passenger to help.

You'll probably find that any initial discomfort caused by safety belts soon goes away. Eventually, you may even feel *more* comfortable wearing safety belts.

"I don't need a safety belt when I'm traveling at low speeds or going on a short trip."

You can't believe every story flying around these days. The truth is that *all* driving can be dangerous.

More than 80 percent of all accidents occur at speeds less than 40 mph. Fatalities involving nonbelted occupants of cars have been recorded at as low as 12 mph. That's about the speed you'd be driving in a parking lot.

Three out of four accidents causing death occur within 25 miles of home. Belt up before driving to your shopping center — just as you would for a long trip.

"When I have my lap belt fastened, I don't need to fasten my shoulder belt."

Don't be left with egg on your face — or worse. It's true that a lap belt will protect you from serious injury. But a shoulder belt provides important additional protection. During a crash, a shoulder belt keeps your head and chest from striking the steering wheel, dashboard and windshield.

A lap *and* shoulder belt offers you the best possible protection in the event of a crash.

HOW IT HAPPENS!

A master sergeant is working on his pickup truck in his driveway at home. He drives the vehicle onto ramps to raise it for the work. Crawling underneath, he disconnects the drive shaft. The truck rolls off the ramps and the member is trapped under it. Twenty minutes later, the driver of a passing vehicle spots him under the truck and calls an ambulance. But it is too late by this time and he cannot be revived.

Obviously, the ramps were a good idea. Ramps work just as well as jack stands, and they require less time and effort. However, when the master sergeant disconnected the drive shaft, he also disconnected the transmission from the rear wheels, making the whole vehicle free to roll.

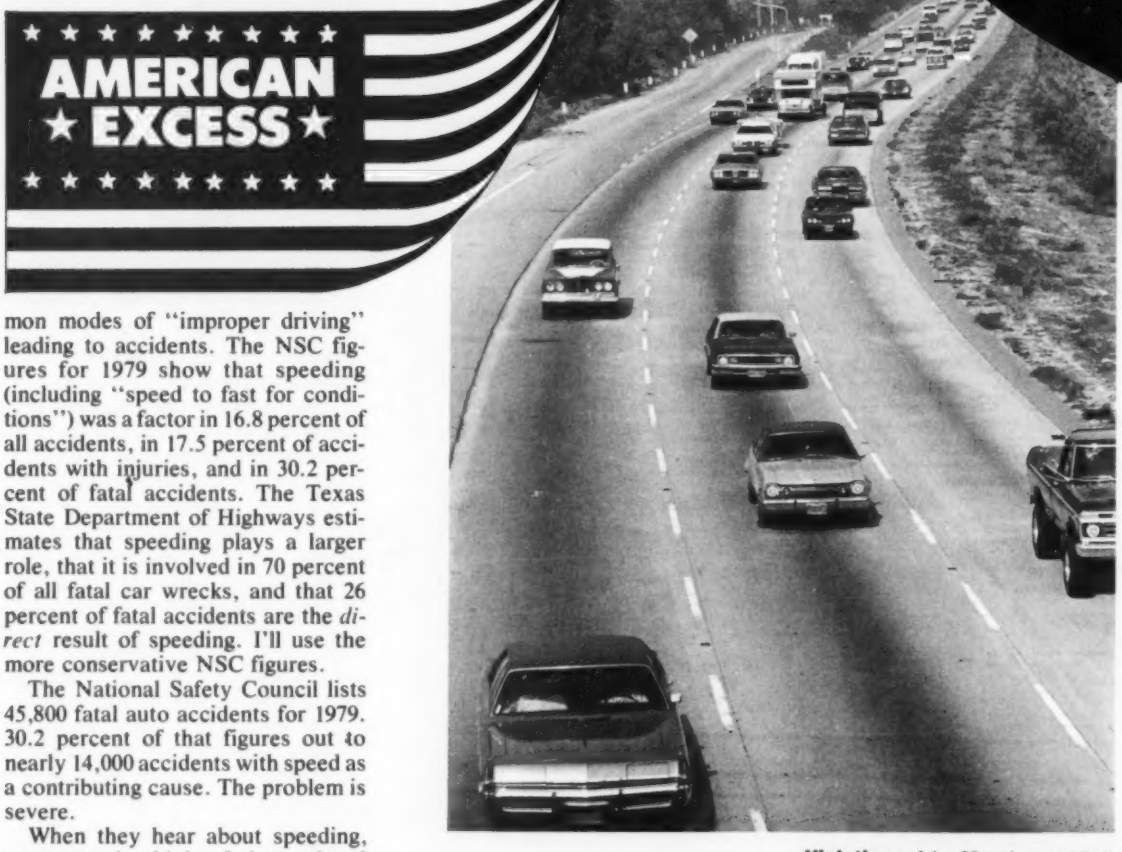
He needed to block the wheels, using wheel chocks or just a piece of two-by-four. When you're going underneath the car make sure it can't move. Get something to block the wheels, whether you're using ramps, a jack or jack stands.

Some observations on a national pastime

Do you remember me? I won a few races several years ago, including the Swiss Grand Prix of 1975. Now I travel in this country, making commercials and trying to keep speed records. That makes me an authority to talk to you about American Excess.

American Excess is speeding. This Excess leads to other excesses — the excess of accidents and deaths on the road and the excess in consumption of gasoline.

Accidents: You may read in various sources that speeding is less of a problem than the amount of enforcement against it would lead you to believe. However, the National Safety Council lists it among the most common modes of "improper driving" leading to accidents. The NSC figures for 1979 show that speeding (including "speed to fast for conditions") was a factor in 16.8 percent of all accidents, in 17.5 percent of accidents with injuries, and in 30.2 percent of fatal accidents. The Texas State Department of Highways estimates that speeding plays a larger role, that it is involved in 70 percent of all fatal car wrecks, and that 26 percent of fatal accidents are the *direct* result of speeding. I'll use the more conservative NSC figures.



The National Safety Council lists 45,800 fatal auto accidents for 1979. 30.2 percent of that figures out to nearly 14,000 accidents with speed as a contributing cause. The problem is severe.

When they hear about speeding, most people think of the national maximum speed limit of 55 miles per hour. This is a problem, but only the most conspicuous one. Equally or more serious is the problem of speeding on roads with slower posted limits.

You see, most automobile travel (about two-thirds of it) is done at speeds slower than 55 mph. And most accidents, over a third of them according to the National Safety Council, occur at intersections, which are not normally found on 55-mph roads. Therefore I think it's a safe bet that the majority of the speeding problem is to be found *off* the highways.

Violations of the 55 mph speed limit get the most attention, perhaps because they are the most blatant violations. Half or more of the country drives faster than 55 on the highways.

Take this rather sarcastic remark for example: "He's a very consistent driver. He always drives at 55 mph — on the highway, on the street, in the alley, in the parking lot . . ." It's true that Americans speed everywhere. They speed through intersections to avoid being stopped by a light turning from amber to red. They speed down residential streets plainly marked "25 MPH." They speed through parking

Two-thirds of all automobile travel in America is done on the streets with speed limits below 55. Therefore most of the speeding is probably occurring on these streets as well.

lots to reach the empty space before the other guy.

55, more or less: Yet, violations of the 55 mph speed limit get the most public attention, perhaps because they are the most blatant examples of American Excess. Take a look at these figures. The U.S. Department of Transportation reported that during the first half of 1980, 49 percent of the country violated the 55 mph limit. During the same period of 1979, the figure was 54.2 percent. The Highway Users Federation reported that in Arizona, California, Montana, New Mexico, Nevada, Texas, Utah and Vermont, 60 percent or more of the motorists violated 55 during the period October 1979 to March 1980. The Department of Transportation says the average speed on American highways from 1973 to 1979 was 58.3 mph. One would suppose that the average was higher in the west, with its open spaces and greater percentage of speeders.

For years there has been talk about raising the American speed limit back to 70 mph. Many people hail this idea, but many others wouldn't really be affected by it because they never slowed down to 55 in the first place.

But Americans should not count on legislation for a higher speed limit. The Highway Users Federation reports that eight state legislatures have rejected measures to raise the limit. Also, 55 is supported by the National Governors Association, the National Safety Council, the American Trucking Association and state law enforcement agencies, as well as the organized traffic safety people. And the Department of Transportation says that the 55 limit saves about 5000 lives each year.

Further, to judge from the results of public opinion surveys, the majority of the American population favors the 55 limit. However, actions speak louder than words, as they say, and the performance of American drivers on the highways indicates they favor something faster. While some shout for a return to 70 mph, others call for lower limits, and there has even been a government study suggesting a 45-mph limit in times of severe gas shortages. So the discussion goes on.

Perhaps Americans should not wish for a return to the faster speed

continued

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limits because of the small cars they are driving today. Smaller (and therefore less powerful) cars take longer to accelerate to highway speeds. A return to 70 mph would greatly increase the difficulty for motorists attempting to enter a freeway in small cars.

Another problem is the crashworthiness of the smaller automobiles. Studies have shown that small cars do not fare very well in crashes, whether with large cars or with other small cars. The occupants of the small vehicles are more likely to be seriously injured or killed than those in large cars. Since crash forces are greater at higher speeds, drivers of small cars would be safer at slower speeds. Obviously, nobody *plans* to have an accident, but it is something to think about.

As for me, I am in favor of whatever is the *posted* limit, be it 55 mph (or 70 or 45) on highways, or 25 mph in residential areas, or 15 mph in parking lots. The reason is that I believe people must have a standard, something they can expect everyone to conform to.

Drivers are much safer if they know what to expect from the others around them. Ask any race driver. He will tell you he feels safer on the track, where he knows what the others will do, than he does on ordinary streets. If every driver obeyed the signs, it would take a lot of the uncertainty out of driving.

Be grateful for radar. In the early 1900s, police took the business of speed traps seriously. In some jurisdictions they were authorized to shoot at tires and to stretch ropes or chains across the road to stop potential speeders. I wonder if they thought of the pit with the lions at the bottom. . . .

Too fast for conditions: Of course, the signs are not always the best indicators of what speed you should travel. Sometimes you should go slower. The speed limit signs are posted for the highest speed you can travel under the best conditions, not under all conditions. Perhaps the signs should read "in moderate traffic, on dry roads, with good visibility" in small letters below the speed limit. That is what the limit means. If anything makes the conditions worse — bad weather or rough road surface, for instance — the driver should slow down, no matter what the sign says. Otherwise it is another example of American Excess called "speed too fast for conditions." Accidents are caused by this every day and people are ticketed for it, too.

I want to explain a special case here, as long as I've mentioned the amount of traffic on the road. Speeding in traffic leads to another problem called "following too close," which in turn leads to a very common accident, the rear-end collision.

When you are following another car, you should leave space in front of you equal to the distance your car travels in two seconds. This is what safety people call the "two-second rule," and it allows you room to stop or maneuver if something happens to the car ahead.

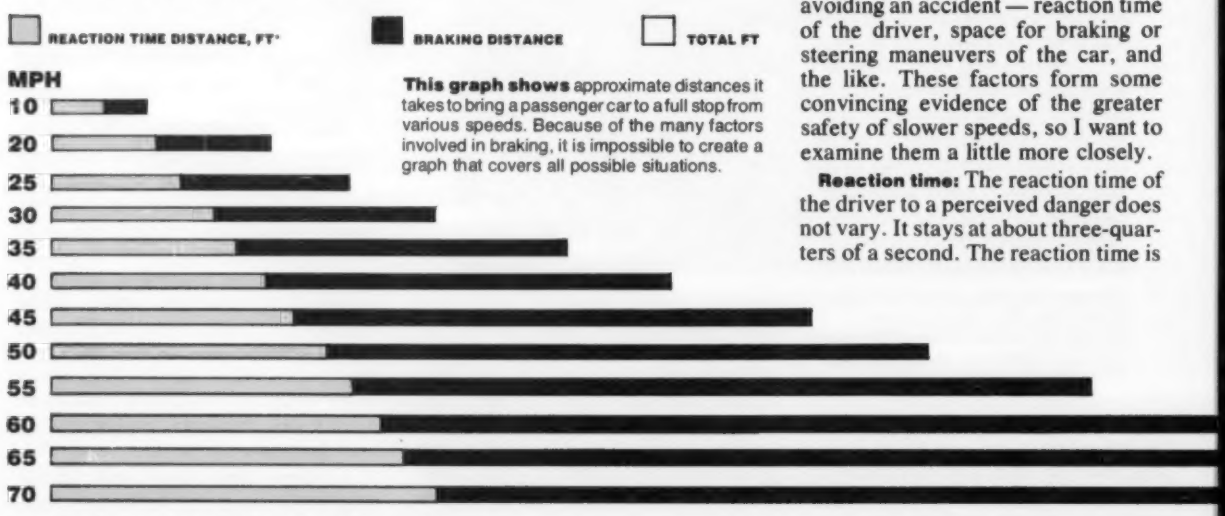
You can set this distance easily if you let the car ahead pass a stationary object and then count "one-thousand-and-one, one-thousand-and-two" before you pass that same object. This rule gives the right amount of space no matter what speed you are traveling. (It also makes you go the same speed as the car ahead, so watch your speedometer and slow down if the other car goes too fast.)

The two-second rule makes allowance for the factors involved in avoiding an accident — reaction time of the driver, space for braking or steering maneuvers of the car, and the like. These factors form some convincing evidence of the greater safety of slower speeds, so I want to examine them a little more closely.

Reaction time: The reaction time of the driver to a perceived danger does not vary. It stays at about three-quarters of a second. The reaction time is

STOPPING DISTANCES FOR PASSENGER CARS

under normal, dry and level road conditions



This graph shows approximate distances it takes to bring a passenger car to a full stop from various speeds. Because of the many factors involved in braking, it is impossible to create a graph that covers all possible situations.

*** Distance car travels in ¾ of a second.**

the time from when the driver sees a danger to when he takes action, and it includes a perception lag, the recognition of the danger and the making of a decision to handle it (Look at "Seeing . . . Being Seen," February 1980 DRIVER, for an examination of this phenomenon).

But although the reaction time will not vary, the maneuvering room the driver has varies by the speed he's traveling. The faster he goes, the less room he has to avoid a danger. Look at the graph I've provided. (This graph, by the way, is only a rough representation of stopping distances, but it serves to illustrate the danger of high speeds.)

Let's take an example (extremely hypothetical, of course) of two drivers, one going 55 mph and one going 70, each moving toward a barrier 400 feet away. All other things being equal — cars, drivers' abilities, etc. — the one going 55 has a better chance to stop. First, he will move 60 feet before he begins to brake, while the other will go 77 feet. He already has a 17-foot advantage. The chart shows the 55 driver will stop 175 feet away from the barrier, and the 70-mph driver will stop less than 20 feet away. That's not much of a margin for error. Add any additional problem, such as oil on the road or some slight mechanical problem with the brakes, and the 70 driver might not stop in time. The 55 driver, with that 175-foot advantage, has a much better chance.

Don't get the idea I think there's anything mystical about 55. Make a similar comparison of 35 and 40, or 25 and 30. I think you'll agree — slower is better because slower is safer.

So the slower driver has a better chance of avoiding an accident. The slower driver also has a better chance of surviving if he fails to avoid the accident. At 70 miles per hour your chances of surviving a crash are less than 50/50. At 55 mph, your chances are 33 to one in your favor. Again, there's nothing special about 55 besides the fact that it's slower. Your odds would improve even more as you slowed down from there. Slower is safer.

When you are passed by a speeder, do you feel the urge to try to keep pace with him? This is "reactive speeding," letting someone else determine your speed for you.

And having said that, I want to warn you about going too slow. There's a limit to how much slower you'll want to travel than the general flow of traffic. Traveling too slowly could earn you a ticket from the police, just like for speeding. On highways, the minimum limit is usually 15 mph below the maximum. Slower than that is considered "impeding traffic." Keep your speed reasonably close to the limit on city streets to avoid impeding traffic.

Consumption: The other cost of American Excess that I mentioned is the draining of the supply of gasoline. It's a simple matter: The faster your car goes, the more gas it uses. Most cars can get about 21 percent better gasoline mileage at 55 mph than they can at 70. At 50 mph, cars get 28 percent more miles per gallon than at 70. And the most fuel-efficient speed for the average automobile is between 30 and 40 mph. Some federal officials say that if U.S. motorists would obey the speed limits, the country could save about *5 billion* gallons of gasoline a year. The 55 mph limit is credited with saving 3.4 billion gallons of gas annually, or over 9 million gallons every day.

			MPH
11	9	20	10
22	23	45	20
27	34	61	25
33	45	78	30
38	67	105	35
44	81	125	40
49	110	159	45
55	133	188	50
60	165	225	55
66	206	272	60
71	231	302	65
77	304	381	70

The real reason: Why do Americans speed? Besides the fact that many of them simply enjoy speeding, I think one reason for American Excess is that they are a nation of procrastinators. Procrastination is the "art" of putting off what you must do until the last moment. So perhaps Americans are always in a hurry because they have put off traveling until they are pressed for time.

In school, everyone is given a simple formula, "Distance equals rate multiplied by time (D=RT)." In any trip, only the rate and the time are variable. So if the American motorist waits too long, the only way he can arrive at his destination on time is by speeding.

There are, of course, other reasons. If you were stopped by a patrolman for speeding, what reason would you give? Many people say, "I didn't notice how fast I was going." In some cases this is true, but in other cases it is only a convenient answer, and it sounds better than the truth.

Think about the times you have been speeding, whether or not you were caught at it. Do any of these statements sound like your real reason?

"I was trying to take the guy in the Triumph off the line."

"I was drag racing a friend."

continued

american excess

continued

"I got tired of following all those slow-moving cars. Being bottled up in traffic makes me nervous."

"Everybody else was doing it; why shouldn't I?"

"I felt like it."

"I like driving fast; driving slow is for my grandmother."

"I wanted to impress the girl in the Porsche." (Or, "the guy in the CJ-5.")

"I was late to work," (or for a date, or an appointment . . .)

"I saw somebody driving strangely, and I sped up to get away from him. I thought he might be drunk."

"I was afraid I'd miss the green light."

"I wanted to see how fast this car would go."

"I was angry and wanted to blow off steam."

"I saw somebody I knew and wanted to catch up with him."

If you take the reasons like that, they don't sound very good, do they?

Reactive speeding: Perhaps worse than these reasons is speeding as a reaction to the speeding of others. I don't mean situations in which the general flow of traffic is faster than the posted limit. I mean situations in which an isolated motorist speeds and causes others to accelerate to keep pace with him. When passed by a speeder, some people will accelerate without realizing it, and others will react as though they had been challenged. This latter group may be just street drag racers who never grew up, or they might be hostile people. Either way, they are dangerous to other drivers. Conscious or unconscious reactive speeders have, in effect, given up their control. They have let someone else (someone not very wise) set their speed for them.

Be alert for this effect the next time you're driving. When a speeder passes you, do you feel a compulsion to speed up? If you do, resist it. Don't let someone else make your decisions for you.

Le dernier mot (the last word): What advice would I give to people to avoid American Excess? First, be serious about your driving. Your automobile is not a toy and it should not be a status symbol either. It is a means of transportation, to get you to where you want to go. Also, when you are going somewhere, leave earlier. If you have plenty of time, you have no reason to speed. And never drink before you drive. Nearly half the traffic accidents each year in America involve drunk drivers, and speeding is often a contributing factor.

In closing, I would like to tell you that despite what you've read, speed does not kill. You've all heard the old joke, "It's not the fall that kills you, it's the sudden stop." Similarly, speeding won't kill you, but the impact with the solid object *will*. The faster you move, the greater the impact forces if you hit something. So slow down and live.

Or to put it another way:

"American Excess. Leave home without it."

Some experts say that if Americans conformed to all speed limits, the country could save about 5 billion gallons of gasoline a year. Continued waste could bring back the gas lines of 1978.

(below) Speeding is not limited to the streets or highways, unfortunately. Many people practice it in the parking lots and alleys.

THINK METRIC I know that driving slowly "goes against the grain" for most Americans, and I have a possible solution for you. Think metric. In Europe we are almost totally on the metric system, and America is following along in many areas including the automobile. Take a look at your speedometer. It is probably calibrated in both miles per hour and kilometers per hour if it was purchased within the past several years.

So if you don't like the slower speed limits, look at the "KPH" scale rather than the "MPH" scale. Voila! You're not going 55, you're going 88! In the city, where the limit is 30 mph, you can drive 48 kph. On your street, you can go 40 kph, which equates to 25 mph. It's all how you look at it.

An open letter from Brig. Gen. Leland K. Lukens, Director of Aerospace Safety

Hands-on!

TO: Commanders

As you may know, I am an avid motorcyclist, and as such I am personally as well as professionally concerned about the safety and welfare of the motorcyclists in the Air Force. Injuries and deaths of Air Force cyclists are increasing and we must do what we can to protect our people.

One way we can do this is to provide "hands-on" courses for the motorcyclists on the base. A program of actual-experience training combined with skills testing could help Air Force cyclists become more familiar with the safe and proficient operation of their machines and thereby reduce the likelihood of their being involved in accidents.

At present, Course 7, "Motorcycle Challenges," is the only requirement for cyclists wishing to ride on base. Course 7 stresses the behavior and attitudes of the cycle rider which are considered the critical factor in cycle accidents, but the course includes no actual cycle riding.

Some 83 percent of the cyclists in the Air Force have attended this very good program. Significantly, the remaining 17 percent account for 50 percent of our cycle deaths. Sixty percent of the non-Course-7 fatalities were cyclists with less than 6 months' experience — the time of greatest danger of accidents. It was because of these facts that Course 7 was made mandatory for anyone wanting to ride on base.

However, the increasing accident experience by Air Force cyclists suggests that we should do more in order to protect them. We have suggested to the major commands that they look into implementation of the Motorcycle Safety Foundation's Motorcycle Rider Course (MRC) as an addition to Course 7. The MRC is a very effective 20-hour course that includes both classroom instruction and hands-on training.

An Air Force base in the southwest with a large motorcycling population implemented the course 19 months ago and they have not had a cycling fatality since. Use of the MRC allows an AF member to try cycling before he buys his own machine.

Another possibility is the Motorcycle Operator Skill Test (MOST). This is a special nine-exercise program that tests riders' ability to operate their cycles safely, especially in traffic. There is also MOST II, a scaled-down version of the MOST program. Information on these is available from the National Highway Traffic Safety Administration (NHTSA) or the Motorcycle Safety Foundation (MSF).

It should be pointed out that the MRC and MOST are not duplications of Course 7. Course 7 was scientifically designed to deal exclusively with the attitudes of the rider, and the MRC and MOST stress riding skills. They are complementary to Course 7.

We need a plan to incorporate such programs into our on-base training. But if the idea of using these programs is to work, it needs the active support of commanders. A commander's interest can provide just the push needed to implement the MRC and/or MOST. Please give them your thoughtful consideration.

The Air Force has 12 MSF-trained chief instructors who can help any base interested in setting up the Motorcycle Rider Course (see "Motorcyclists Help Motorcycling," December 1980 DRIVER). Further, my staff and I are available to answer any questions you may have.

Let's do all we can to help the Air Force motorcycling population. We can't afford to lose 48 of our good young people in '81 as we did in 1980.

LELAND K. LUKENS
Brigadier General, USAF
Director of Aerospace Safety

tteecc!h! DOUBLE TECH Q A

With TSgt RON LATHROP

COMMENT: Is it necessary to have your wheels balanced each and every time that you have them rotated?

REPLY: Yes. In fact the balancing is probably more important than the rotating. If tires and wheels were solid units they probably would need to be balanced only once. But they aren't. The tire actually moves on the rim and therefore must be rebalanced regularly.

Tires are rotated to even out wear patterns on rear-wheel-drive cars. However, with front-wheel-drive vehicles, manufacturers are currently recommending that tires be rotated only when irregular wear is apparent. The end result is the owner will be buying only front tires because the rears will probably last the life of the car.

I might also point out that even the best sealed tire-wheel unit will still lose some air, so check pressures at least once a month.

COMMENT: I have had a problem of dwell versus point gap for many years. On my 1974 six-cylinder car when I bring the dwell to 33 degrees the point gap is about .012 to .014, not the .019 specified. Which is right, the point gap of .019 or the dwell angle of 33 degrees?

REPLY: Actually your problem is probably a worn distributor, but let's talk about dwell first.

Dwell is the number of degrees that the ignition points are closed. As you pointed out, it is the opposite of the point gap.

When the points are closed the magnetic field builds up in the coil. If the points aren't closed long enough, the magnetic field will not be strong enough, and when it collapses the spark it produces will be weak.

Too little dwell causes engine misfire at high speed. Too much dwell, which allows points to remain closed too long, causes points to burn.

The reason your point gap and dwell don't match the specifications may very well be a worn distributor. To check this, do a dwell-holding test to see if the dwell reading remains the same as engine speed increases. Slowly increase engine speed from idle to 1,500 rpm and then slowly let it drop back to idle. Never exceed 1,500 rpm. If the dwell varies more than three degrees, the distributor is worn and should be removed for servicing.

COMMENT: I've replaced the complete arm and blade assembly of my windshield wiper system, but I am still having vision problems. Is there anything I can do short of replacing the glass?

REPLY: Yes. As you are aware, poor vision problems may not be strictly a wiper system component problem but a windshield problem. Windshields should be cleaned periodically to remove any dirt, oil, road film, sap or other contaminants which accumulate and impair wiper system effectiveness.

Cleaning agents such as "Bon Ami" cleaning cake and cleaning powder are very effective for cleaning windshields. Be sure to read the directions on these products before using them as a glass cleaner. Some may be abrasive and scratch the windshield. And NEVER use a polishing cleanser on glass.

For good vision, clean windshields inside and out frequently with a suitable cleanser and replace wiper blade or refills routinely. You can't drive defensively if you can't see.

COMMENT: When shopping for a used car you always recommend a compression check. Can you tell me simply what to do and what I'm looking for?

REPLY: Assuming that you have a compression gauge, first disconnect the distributor. Now remove all the spark plugs and open the throttle and choke. Hopefully the battery is at or near full charge. Follow the gauge instruction manual and take individual cylinder readings with four "puffs" per cylinder.

Normally compression builds up quickly and evenly to specified compression on each cylinder. The lowest reading cylinder should not be less than 70 percent of the highest and no cylinder reading should be less than 100 pounds.

If the compression is low on the first stroke and tends to build up on following strokes but does not reach normal, the piston rings may be leaking. Squirt a plunger-type oiler into the cylinder three times and do the check over. If the compression improves considerably, you've located at least a ring job.

If the compression is low on the first stroke and doesn't build up on the following strokes, the valves may be leaking. The addition of oil to the cylinder will not improve the compression much in this case, and the engine will need a valve job.

That's the short and simple of it.

COMMENT: Maybe I'm paranoid, but every time a service station attendant goes under my hood, I'm afraid he's going to rip me off for belts I don't need. What can I do?

REPLY: Do it yourself.

Since belts are out of sight they are also out of mind for most drivers. As a result they come to our attention in just two ways. The first is when they break. The other is through inspection — either routine or problem-related.

Belts need attention and frequent inspection. At least once a month you should check all your vehicle's belts for proper adjustment, cracking, splitting, unusual wear, glazing (a shiny appearance on the sidewalls) and grease or oil. No matter how good it looks, if a belt has done 20,000 miles you should replace it.

Belts which are not adjusted properly may slip and self-destruct prematurely. Alternator belt slippage will likely result in an inadequate recharge rate to achieve full battery power. Think about the cost of replacing a battery when a belt adjustment would have solved the problem.

(left) SSgt LaColle's helmet where it scraped the pavement. His helmet saved his life but, unfortunately, his face also scraped the pavement.
(right) Fatigue jacket after motorcycle accident. A leather jacket would have slid on the pavement, preventing abrasions.
(USAF photos by Ron Samuels)

HELMETS don't prevent accidents, BUT

by
1Lt J. CLEVELAND
1965th Communications
Squadron Norton AFB, CA

A sunny afternoon in southern California and you're riding down the highway on your motorcycle. There are no helmet laws in this state. Should you wear one? SSgt Ted LaColle of the 1965th Communications Squadron would say YES. He was thrown off his bike recently, and his helmet saved his life.

A bicycle fell off a camper. The car behind the camper swerved to miss the bike and hit SSgt LaColle. LaColle was thrown off his bike by the impact. He has gotten a new helmet now; the new one is a full-face helmet. Ted said, "The full-face would have kept my face from scraping the pavement when I was knocked off my bike." His fatigue jacket prevented serious abrasions to his arms, but a leather jacket would have been better.

Remember when you get on your bike that the most important thing on it is you.

When you were a kid, you played a lot of games on the school playground at recess. They were always fun, usually involved some kind of contact, and were sometimes violent.

Now that you're an adult, at least according to your driver's license, you think you've left all those games behind, don't you? Wrong, bunky. You're still playing some of them, but they're less fun and a lot more dangerous.

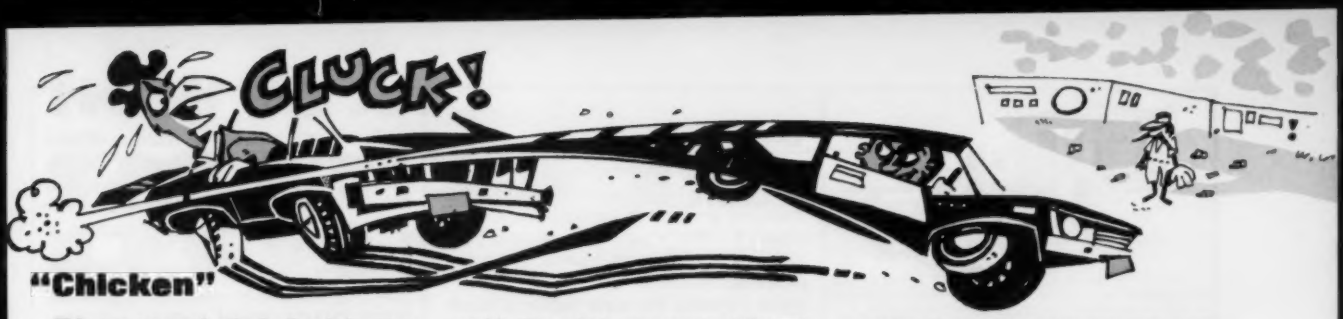
On the automotive playground

Dodge Ball

The idea behind this game was for the kids to get out of the way of a basketball thrown at them, usually by a kid in the class who was big enough to play high school football. If a kid was hit he was "out." Adults play a similar game in their cars, only it's called "Who's got right-of-way?" At intersections, they try to make a turn without getting hit by a car coming from another direction. Failure to yield right-of-way could take them "out."

Tag

The object was to run around and keep away from the kid who was "it." "It" tried to tag the other kids, to make *them* "it." He usually used more of a "punch" or a "shove" than a "tag." Kids never tired of this one. They played it everywhere — on the grass, on the concrete playground — and in any weather, even when it was too slick to keep their feet under them. Adults still play this one, too. But now they call it "speeding," or "speed too fast for conditions." The idea is still to avoid being hit by others, and they still play it anywhere and in any kind of weather, and on any surface, wet or dry. However, if they get "tagged," they're not "it." They're just "out."



"Chicken"

This was a game for the foolhardy (or more properly, "foolish"). The kids had to get off the playground for this one, out into the street. There, they waited until the last possible moment before jumping out of the way of approaching cars to see who would "chicken out" first. If they didn't jump, they got hit. Those kids who survived through their childhood still play a version of "chicken." It's called "improper lane change." The driver changes lanes without looking and then sees whether he or the motorist in the next lane will veer away first. A favorite form of automotive "chicken" involves passing. The passing motorist waits until the last possible moment before moving out in the opposing lane. Then he can see who will chicken out first, the oncoming driver or himself. This automotive game is exactly like the child's game in one way — if the driver makes a mistake, he's had it.

Simon Says

This was a nonviolent game. One kid would tell the others to do something, preceded by the words "Simon says . . . " If any of the kids did the thing when he omitted the words "Simon says," they were out. Adult motorists play something similar that we could call "*Sign* says" or perhaps "Signal says" or "Line-in-the-street says". This is the "improper turn." Drivers will ignore instructions and turn against a light, or where a sign prohibits a turn, or just where a turn isn't a good idea. If they're lucky, this game will be nonviolent like the children's game. Quite often, however, they are not lucky.

Leap Frog

This game was kind of cute. Several kids would get on their hands and knees in a line. Another kid would put his hands on their backs and jump over them like a frog, one at a time. As an adult automotive game, this one would be the most interesting of all to watch, except for one problem — cars can't jump. So the game becomes known as "following too close" for those on freeways, and as "overtaking slower vehicles" for those on surface streets. The driver who is playing simply runs into the car ahead of him, or perhaps a whole *line* of cars. It is not cute.

Blind Man's Bluff

This game involved putting a blindfold on one kid and spinning him around until he was dizzy. Then he would try to find the other kids and keep from running into things. Adults have a very similar game they play in their cars — "drunk driving." They aren't blindfolded, but they might as well be (hence the expression "blind drunk"), and they certainly *are* dizzy. They also tend to run into a lot of things — curbs, trees, pedestrians, moving cars, *parked* cars . . . This is one of their favorite games, and one of the most dangerous.

Our message? Quit playing games and get serious about your driving. Save the games for the *real* playground where they belong.

Timely Topics

IMPORT REPAIRS HIGH

An owner of an import car is paying as much as 50 percent more for a variety of repairs and maintenance items as those who own domestic counterparts, according to a study by the Motor and Equipment Manufacturers Association. The study covered repairs on eight parts — water pump, alternator, front disc brakes, starter, carburetor, fuel pump, catalytic converter and lower ball joints. Maintenance costs were based on recommended intervals for the first 45,000 miles.

QUAKER STATE RECALLS OIL

Did you buy Quaker State oil between Nov. 15, 1980 and Jan. 9, 1981? If so, you may be in for a surprise. A problem exists with Quaker State's 10W40 deluxe and 10W30 Super Blend oils sold during that period, according to officials at Quaker State Oil Refining Company. The additive used in the oils during this production period thickens when temperatures fall below zero and prevents lubrication of internal combustion engines.

The stocks of these particular oils have now been removed from sale at Army and Air Force Exchange service retail stores and service stations. Personnel who purchased the oil are entitled to a refund. If a full case of oil was purchased, the customer should check for production numbers appearing either on the top or on the side of the carton. Production numbers for the defective oil are 8110-13 through 8110-30 and 8120-01 through 8120-23. Cases bearing these numbers may be returned to the place of purchase for a full refund.

If you had your oil changed at the base service station during this time there should be a sticker on your door stating the date it was changed and what type of oil was used. If it was one of the defective Quaker State oils, most base service stations will change your oil and filter for free.

Claims for engine damage will be processed through the Travelers Insurance Company, according to Quaker State officials. AAFES customers in the continental United States who experience engine trouble resulting from oil bought and used between Nov. 15, 1980 and Jan. 9, 1981 can call toll free, 1-800-243-3940 to get the telephone number and address of the insurance office in their area.

BREAKING YOUR FACE

A recent study says that most of the injuries involving facial lacerations and facial fractures are caused by motor vehicle accidents. The study was a one-year examination of facial injuries treated in hospitals in Dane County, Wisconsin, which includes the state capital of Madison. Severe facial lacerations from auto accidents occurred at a ratio of 50 per 100,000 population in that county, and severe facial fractures were 11 per 100,000. Using these figures, the authors of the study estimated the incidence for the entire United States at about 114,000 severe facial lacerations and 25,000 severe facial fractures per year. The estimate for all facial injuries caused by car crashes, regardless of severity, was 266,000 lacerations and 52,000 fractures.

The Insurance Institute for Highway Safety reports most of these injuries were to automobile drivers and passengers, "although motorcyclists and pedestrians struck by vehicles also are involved. Drivers' faces are most commonly fractured or lacerated by steering wheels. Windshields are also prominently involved. For passengers, windshields are the primary source of facial injury. Instrument panels and other occupant compartment structures are also involved."

This is the "second collision" you've read about in DRIVER. What can prevent these injuries? A simple device that keeps your face away from the wheel and the windshield — *your safety belts*.

SPEAKING DEVICE WAKES DROWSY DRIVER

A new device developed by the Industrial Products Research Institute of the Agency of Industrial Science and Technology in Japan, is expected to reduce the accident, injury, and death toll caused by drivers falling asleep at the wheel.

The equipment incorporates a dozing sensor, which senses brain waves. If the driver starts to fall asleep, the apparatus detects this from his brain wave patterns and wakes him up by calling his name.

This is only one use of voice-synthesis technology being developed in Japan. Clocks, vending machines, elevators, and fire and burglar alarms can all be programmed to give out information in a human voice.

Other automobile monitoring systems that may use human voice warnings in the future include speed control, fuel consumption, and battery charging.

Voice warnings have been found to be much more effective than meters. *(International Road Federation)*

A WARNING, PLAIN AND SIMPLE

Henry Ortner Jr., technical advisor for the Association of Diesel Specialists, issues this warning to owners of Volkswagen models equipped with 1.5-liter diesel engines:

"Uncontrolled acceleration will happen when the engine draws a quantity of crankcase oil from the valve rocker box through the crankcase ventilation hose to the air cleaner, then into intake manifold and combustion chambers."

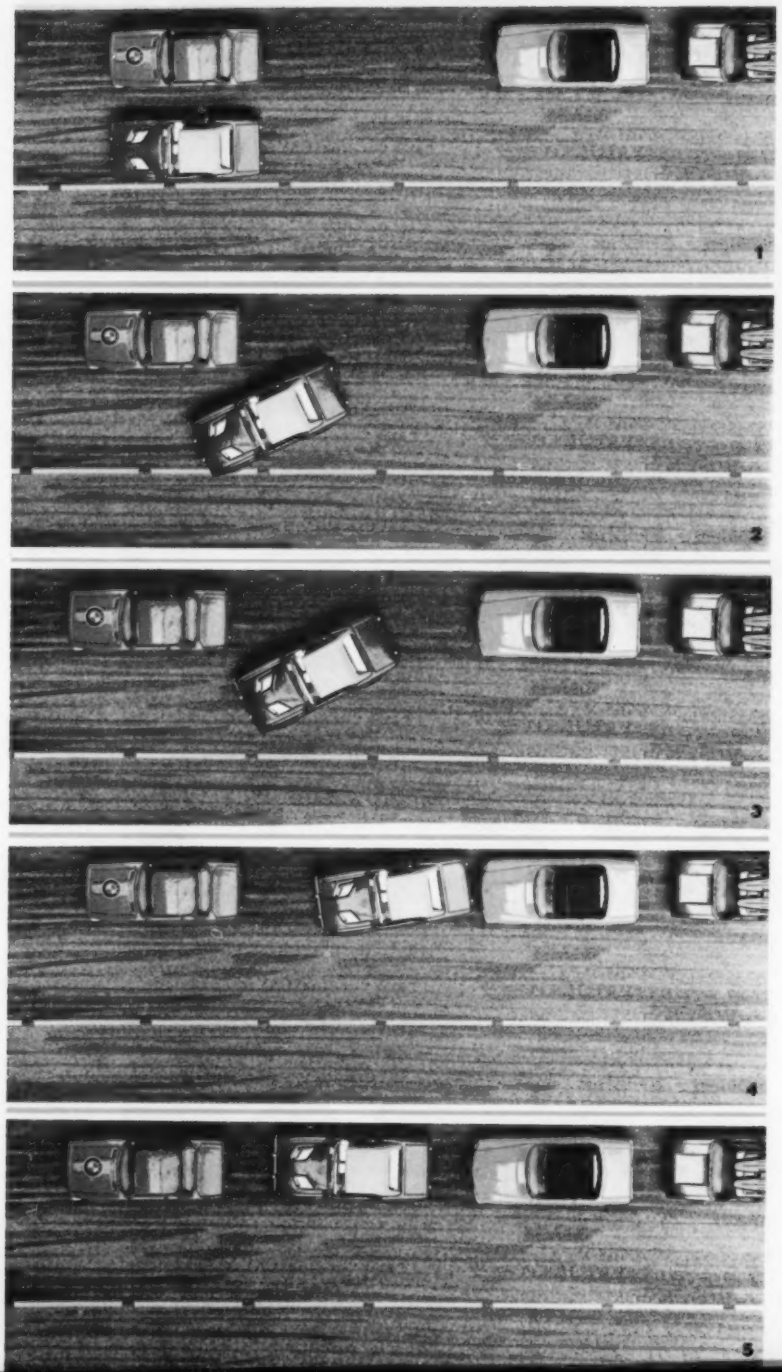
He recounts the experience of a driver who lifted her foot from the accelerator pedal to slow down, only to have the engine speed up and the car shoot ahead. She slammed on the brakes and stalled the engine.

We're reminding you about this again, because it is a serious condition. A recall advising owners to have crankcase-ventilation hose kit 068198999 installed has been issued by VW. You may have received a notice. If you didn't, don't wait for it. Get your car to a VW dealer and have this kit installed. *(Popular Mechanics)*

STUDY BLAMES RTOR FOR INCREASED ACCIDENTS, INJURIES

Right turn on red is saving substantial amounts of energy, but, according to a new study, it is also responsible for a dramatic increase in intersection crashes and pedestrian injuries. A joint research project by the *Insurance Institute for Highway Safety* and *Moshman Associates, Inc.*, has concluded that intersection crashes involving right turn maneuvers have risen 20 percent because of RTOR while pedestrian injuries have increased 57 percent. The highest increases were reported in urban areas. Nationwide there are *20,000 additional crashes per year*, 1,400 involving pedestrians, researchers found. A breakdown of the pedestrian accidents shows a more than 30 percent increase for children, about a 100 percent jump among adults, and a more than 110 percent rise for the elderly.

HOW TO...
PARALLEL PARK



Here are some tips to make a problem parking situation a little easier. It is not a case of "back until you hear the crunch"!

1. **When you see** a place large enough to move your car into (a few feet longer than the car), pull up parallel to the forward car and about 2 or 3 feet away from it, with your rear bumper even with its rear bumper.

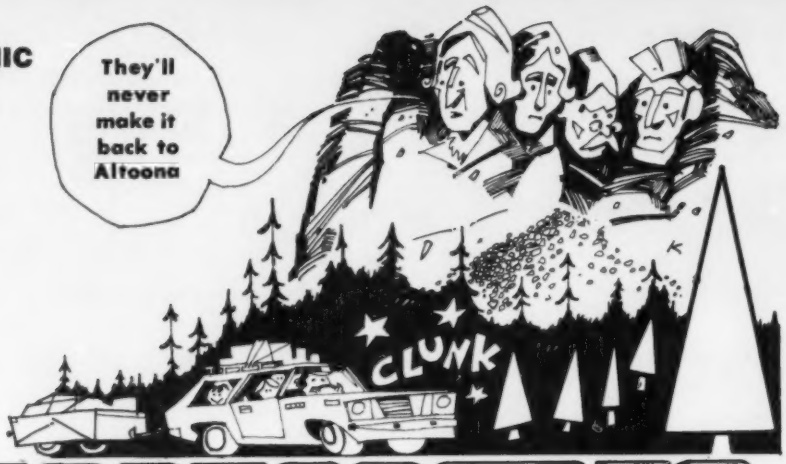
2. **Back up slowly,** steering to the right. (When parallel parking, always move the car slowly, but steer fast.) Stop when the car is at about a 45-degree angle to the curb, and your steering wheel is even with the forward car's rear bumper.

3. **Begin backing** slowly again while straightening the front wheels. Stop when the right end of your front bumper is even with the left end of the other car's bumper. The tail of your car should be about a foot from the curb.

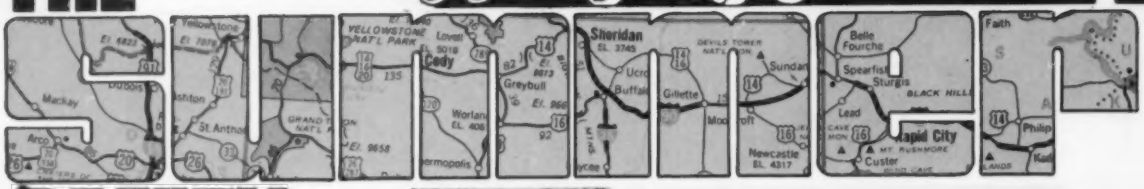
4. **Start backing again,** this time turning the wheels as far to the left as they will go. Stop when the car is parallel to the curb, but before you touch the car in back.

5. **Straighten** the front wheels and drive forward until you have equal space in front and behind.

(From AAA's "How to Drive")



THE SUMMER SAFETY CHECK



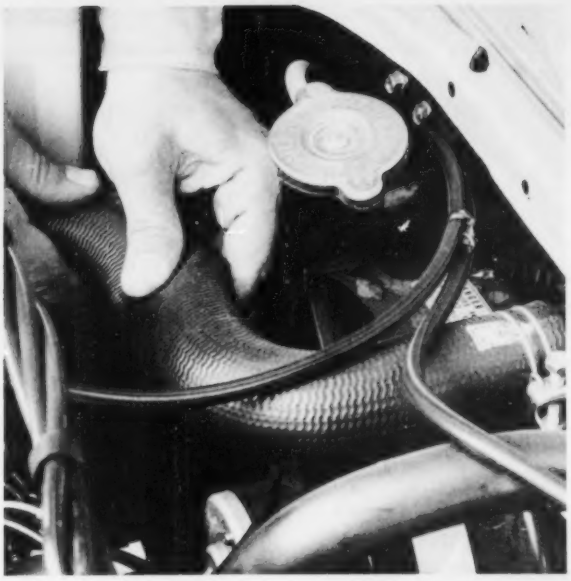
Summer vacation is just around the weekend. All you have to do is pitch everything into the old freeway battlecruiser, roll up 300-plus miles a day, and look at the slides and credit card slips when you get back home, right? WRONG!!!

Before you take your cruiser out for a vacation romp or a weekend dash, you'd better be doubly sure she's shipshape. After all, why spend your leave time broken down at the side of a deserted highway miles from nowhere? It just takes all the fun out of time off. Besides it can be downright frightening to be broken down, as well as extremely dangerous.

The wise traveler always conducts a complete maintenance servicing with a heavy emphasis on safety before any extended trip.

Even if you're not a do-it-yourselfer, pay close attention because you'll be asking somebody to perform the maintenance.

A tune-up and routine maintenance update are musts before summer vacation. See "The Backyard Mechanic," April and May 1980 DRIVER Magazine.



(above, left)
If any hoses or belts are checked, cracked or frayed, they should be replaced. If they are more than two years old, replace them anyway. See "The Backyard Mechanic," August 1980 DRIVER Magazine.

(above, right)
Always carry a repair manual for your vehicle, especially if the vehicle is imported. When your car is broken down in Cohoctah, Mich., and the repair parts are coming in on the bus, you may be able to talk the local service station grease monkey into doing the work if you have a book he can follow. And if you're stranded, you may have to give it a shot yourself.

On the top of the list is a tune-up. There's nothing more frightening than having your vehicle stall while passing or in the highspeed lane.

Next, update all the routine maintenance items:

- Oil
- Oil filter
- Air filter
- Coolant
- Check all fluid levels
  - Water
  - Oil
  - Master brake cylinder
  - Power steering reservoir
  - Transmission
  - Differential
  - Battery

continued

Check the spare tire and make sure it is usable. Is there enough air in it?

continued

If you are having somebody else perform your maintenance, be sure to tell them you are going on vacation and that you want a complete safety check to include:

- Tires (don't forget the spare)
- Steering
- Brakes
- Hoses
- Belts
- Exhaust system
- Windshield wipers
- Windshield washers
- All lights
- Front-end alignment

If you're doing it yourself, what are you waiting for? Get busy and do it now. You should know your cues.

All right, let's pack a kit to get your car running should it break on the trip. Hoses, belts and fuses are a must. If your vehicle is more exotic, you may also want to have a tune-up kit (points, condenser and rotor), a set of sparkplugs, and maybe a fuel pump or whatever else you know it has an appetite for. And it is always nice to have a set of jumper cables.

Ah, vacation time has arrived. Before starting out each day, check your tire pressures. Also check the oil, coolant and other fluid levels. And check them again at each gas stop.

If checking everything at every fuel stop sounds unrealistic, think about this: Long trips mean *safety up*, not just gas up!

A six-inch piece of 2-by-4 will keep the jack from burying itself and may provide enough height to get oversized tires off and on.

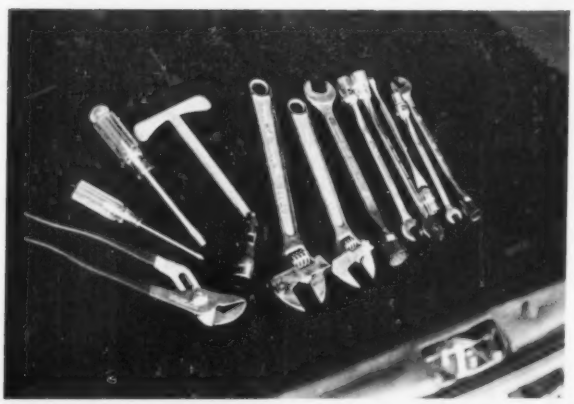
Make sure your jack works by trying it before going on a trip.

(right)
Brake fluid, radiator sealant and a quart of oil are all part of your car's emergency kit. Can you recall other items mentioned in the text that should be in the kit?

(left)
OK, there's enough fluid in the battery, so now check your guarantee. That's right, the guarantee. If there is less than three months left on the warranty, you'd better buy a new battery before the trip.

(below, left)
You should never be without at least a pair of pliers, both standard and Phillips-head screwdrivers, an adjustable wrench or two, a sparkplug wrench and a set of combination (open- and box-end) wrenches.

(below, right)
A fold-up plastic ground sheet, a pair of leather work gloves, flares, a roll of electrician's tape and baling wire can be very helpful in getting a sick vehicle to the nearest repair facility. Besides a fire extinguisher and jumper cables, what else would you carry?



LETTERS to the EDITOR — BACKFIRE

CUSTOMIZED VANS

I really enjoy the articles your magazine prints. I especially enjoyed "Customized Vans — How Safe?" in the February 1981 issue.

I learned a lot about vans and, although I hope to own one someday, I'm not so sure I want a customized van after reading your article. At least if I do buy a van I'll know what to expect and, thanks to you, I'll probably be more safety conscious.

SSgt Donna M. Allen, USAF
Andrews AFB, MD 20331

DRIVER is here to help you whenever we can.

SEAT BELT LAW

In re your editorial in the February 1981 issue titled "A National Seat Belt Law?" I am a Spanish civilian ground safety type, and one of my duties is to teach traffic safety courses.

In Course IV there is an unscored question concerning whether there should be a law requiring the use of restraint devices. My observations for quite some time have been that approximately 90 percent of the students respond affirmatively to this question.

This is indicative that the young Air Force population (late teens and early twenties), if polled on this subject would almost unanimously reflect that not only are they seat belt believers, but that they think such a law would be beneficial to the "more mature" age groups as well.

The controversy about whether or not there should be such a seat belt law often reminds me of the fable about a family of hares being wiped out while trying to agree whether the barkings they heard were from beagles or greyhounds. Perhaps you could run an inquiry on this subject, which if substantiated could give your great magazine the chance to accomplish its most important contribution to traffic safety yet: the use on a national scale of the best, cheapest and easiest safety device the automobile industry has come up with in the last decade or two.

Sr. Rogelio Cabiscol
APO New York 09286

We often wish we had funds to do more surveys. Our every-other-year readership survey is the only one we do. We usually ask "Do you wear seat belts?" and we get more checks by "sometimes" than by "always." Unfortunately, many people who truly believe that seat belts save lives still do not have the habit of buckling up every time.

KUDOS

I just wanted to let you know how much I enjoyed your article *a lá* Sherlock Holmes on damp streets. The creativity demonstration was a pure joy. After 10 years of dry Air Force reading, I was pleasantly surprised to find a small pocket of creativity flourishing at DRIVER Magazine. Keep up the great work.

Capt Ellen C. Matz, USAF
Peterson AFB, CO 80914

Thanks, Ma'am. We needed that.

TWO SIDES TO A STORY

Many articles have appeared in your magazine as well as letters supporting the government theory that we are running out of energy and that the driving attitudes are partly to blame. As editorialist James Kilpatrick said, "most stories have two sides and this is one of them."

I am enclosing a copy of that editorial and hope sincerely that you can find space in your magazine in the near future to print "the other side of the news." When only one side of the story is printed, we are reminded of the communistic way of life.

MSgt Robert E. Crout, ANG
Greenville, SC 29606

Mr. Kilpatrick's opinion that the 55 mph speed limit does not really save energy or lives is shared by a lot of people lately. From the safety point of view, DRIVER is primarily concerned with speed too fast for conditions, which is the direct cause of more than a quarter of all traffic accidents. See our article "American Excess" in this issue.

CONVEX MIRRORS

I read with enthusiasm your article "Mirror, Mirror on the Car" in the February 1981 issue. Having been a cyclist myself, I felt empathy with the writer.

I have a question that bothers me greatly. As Transportation Officer, Safety Officer, and Public Works Officer for Navy Security Group Activity, Misawa, Japan, I am distressed at the outside rear-view mirrors that are on all military vehicles of Japanese manufacture, and on all other vehicles driven by the personnel stationed in Japan. They are, without exception, of the curved, distorting variety. I have used these as complementary mirrors on my RVs, and have seen them on Japanese motorcycles in the States, but never have I seen these as the only mirrors for rear vision. Particularly, I refer to those cases such as station wagons, vans, pickups, or trucks that don't always allow the use of the inside mirrors. These, where available, *are* of the flat type.

These type of mirrors were not ref-

erenced in your article. It is my feeling that they are not good for anything except sighting vehicles immediately to the side or rear of your vehicle, and are virtually useless for other necessary driving decisions, such as how fast another car, cycle, or truck is overtaking you.

I would very much appreciate your comments on this subject. Thank you, in advance, for your time.

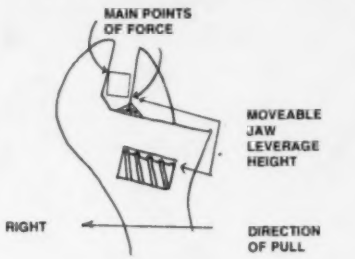
LT Troy R. Caffey, USNR
APO San Francisco 96210

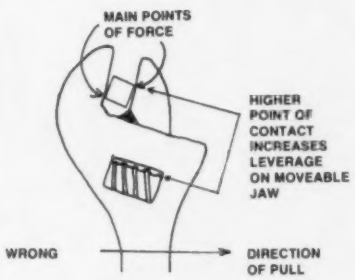
We haven't seen many of these convex mirrors as standard equipment, other than as a right side mirror on a car with dual sport mirrors. The California Highway Patrol tells us they're not illegal, but they're not recommended, because they distort your view. We agree with you on using them as complementary mirrors. If anyone has a vehicle with only convex mirrors, he should probably have them replaced with nondistorting mirrors. On RVs and certain trucks, of course, having both kinds is a good idea.

ADJUSTABLE WRENCHES

The Backyard Mechanic's "April Tools" article was well written, and contained very good information for the novice; however, the reference to adjustable wrenches in the photographs on page 28 were exactly backwards (probably the backward mechanic made the captions for you).

When you pull on an adjustable wrench, the contact of the bolt/nut to the moveable jaw should be at its lowest point on the moveable jaw for the following reason: If the contact is high on the moveable jaw, this increases the pressure exerted on the worm gear (thumbwheel), causing it to slip more readily. With the pressure of the contact low on the moveable jaw, some of the pressure is transferred to the guides of the main body of the wrench, and therefore away from the moveable jaw. The lower photo is correct on page 28, with the exception of the bolt not being properly "bottomed" in jaws of the wrench, as it should be. The following diagram should help to explain what I'm talking about:





I've been a mechanic for 23 years, and after busting my knuckles too many times, I learned that I bust my knuckles on this type of knuckle-buster a lot less often when I use it in the way indicated.

A. D. Edmonds, USAF
Offutt AFB, NE 68113

Would you believe that DRIVER's technical editor discussed this with several renowned "Backyard Mechanics" and other magazine technical editors and they all admit that you are right and they've been wrong for years. But the bottom line is: adjustable wrenches should NOT be used on very tight bolts as the jaws will probably spread enough to round the head no matter which way you hold it.

BICYCLE SAFETY LEVERS

I really appreciate the fine article on bicycling you put in the April issue. It's the sort of thing which will inform riders and drivers and promote better mutual road use.

I take exception to one hint, however. Brake extension, or safety levers, should not be disregarded if the rider tends to ride upright. The model shown in the illustrations rides down on the drops in each picture, so reliance on the regular brake levers is appropriate. With properly adjusted brakes, either the extension levers or the regular levers will apply total braking force. With ill-adjusted brakes, maybe neither will. The issue is to keep the brakes adjusted, as you wisely recommend. In an emergency stop situation, an upright rider can grab the extension levers faster than he/she can grab the regular levers. The time difference, even at 15 mph, could be critical.

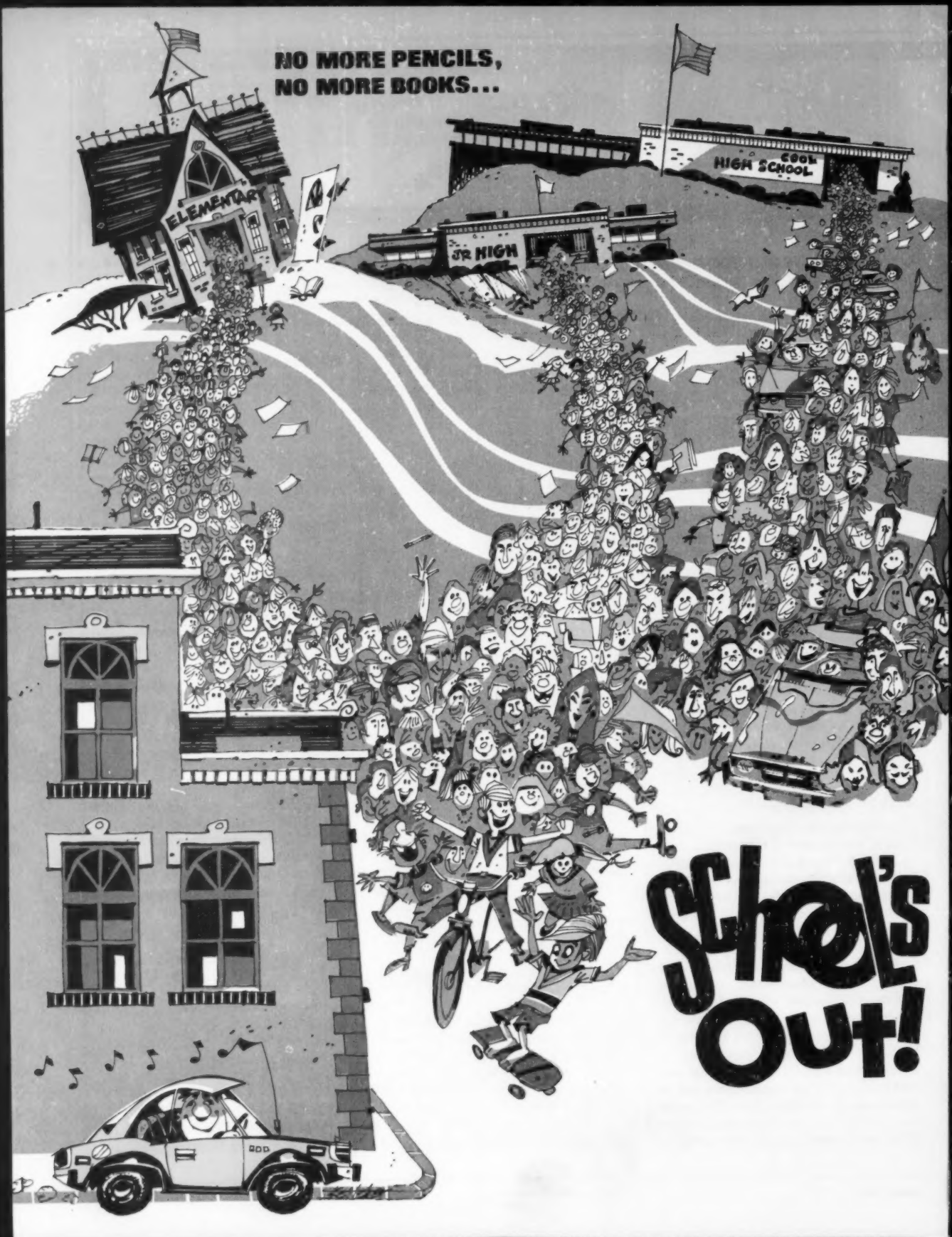
I would like to have seen the model wearing a helmet with a rear-view mirror, and gloves. Routine wear of these safety devices reduces the most common injuries in bicycle mishaps.

You've got a fine magazine which we all read avidly. Keep up the good work.

Capt William C. Bennett, USAF
Randolph AFB, TX 78150

Thanks for clearing up the matter of the safety levers. Incidentally, we want to thank all you bicyclists who responded to our request last March to write us if you commute by bike and tell us the how's and why's. We've received a lot of great letters and will be talking more about bikes in July or August.

☆U.S. GOVERNMENT PRINTING OFFICE: 1981 783-022/06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